REMARKS

Claims 1-9 are pending in the application. Claims 4-8 have been amended. Applicants reserve the right to pursue the original claims and other claims in this and other applications.

The abstract is objected to as being informal. Reconsideration is respectfully requested. The abstract has been amended to become one paragraph and to remove the word "said." The application as amended is believed to be in proper form.

Claims 4-8 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite. Reconsideration is requested. Claims 4-8 have been amended to obviate the concerns raised in the Office Action. The claims as amended are believed to be in full compliance with 35 U.S.C. § 112.

Claims 2, 3/2 and 4/2 stand rejected under 35 U.S.C. § 103 as being unpatentable over Datta et al. (U.S. Patent Application Publication No. 2002/0064592 A1) in combination with JP 2000-144438 (JP '438). The Office Action contends it would have been obvious to incorporate methanol into the Datta bath in light of JP '438. Reconsideration is respectfully requested.

Independent claim 2 recites "wherein said reducing agent for copper ion is glyoxylic acid or a salt thereof" and "said electroless copper plating solution contains at least one member selected from the group consisting of a primary amine, a secondary amine and methanol in an amount of 0.001 mol/L or more."

JP '438 discloses a plating solution using formaldehyde as a reducing agent. Such a plating solution is different from a plating solution using a glyoxylic acid as a reducing agent. The methanol contained in the JP '438 solution is inevitably formed by Cannizzaro's reaction of formaldehyde. Thus, JP '438 does not teach that Cannizzaro's reaction of glyoxylic acid can be restricted by intentionally adding methanol to a plating solution using glyoxylic acid as a reducing agent as in the present invention.

The reason why methanol is in the JP '438 plating solution is that it is inevitably formed by decomposition of formaldehyde by Cannizzaro's reaction which proceeds into the plating solution as follows: $2HCHO + OH^- \rightarrow CH_3OH + HCOO^-$ (see paragraph [0008] at page 3 of JP '438). That is, in the JP '438 solution, formaldehyde is decomposed by Cannizzaro's reaction to produce methanol. In contrast, a glyoxylic acid (not formaldehyde) is used as a reducing agent in the invention of column 2, and methanol is added to the plating solution. Although a glyoxylic acid is subjected to Cannizzaro's reaction, methanol is not generated: $2CHOCOOH + 2OH^- \rightarrow C_2O_4^{2-} + HOCH_2COOH + H_2O$ (see paragraph [0008] at page 3 of JP '438). Since the plating solution of claim 2 does not contain formaldehyde and glyoxylic acid does not decompose to methanol, methanol by Cannizzaro's reaction is not generated.

Thus, although a glyoxylic acid is subjected to Cannizzaro's reaction, methanol is never generated. In the present invention, methanol is intentionally added into a plating solution but is not a decomposed compound inevitably formed by Cannizzaro's reaction. The use of glyoxylic acid as a reducing agent and further adding methanol into a plating solution according to the invention of claim 2 is not taught or suggested by Datta or JP '438, even when the references are taken in combination. Accordingly, one skilled in the art would not have been motivated to combine these disparate references, and withdrawal of the rejection of claim 2 is respectfully requested.

Claims 5/2, 6/5/2, 7/2, 8/7/2 and 9/2 should be allowable along with claim 2 and for other reasons.

Further, in connection with the foregoing, please note that it does not appear that the specification at page 18, lines 2-19 refers to prior art. Its inclusion in the rejection of claim 2 as "admitted" prior art is not understood.

In view of the above, each of the presently pending claims in this application is believed to be in immediate condition for allowance. Accordingly, the Examiner is respectfully requested to pass this application to issue.

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Respectfully submitted,

By _____

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